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EXAMINER

BRYANT, DOUGLAS J.

ART UNIT	PAPER NUMBER
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4123

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,767	Applicant(s) LOBOZ ET AL.	
	Examiner DOUGLAS BRYANT	Art Unit 4123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/24/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/24/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Construction

The following elements are not construed under 35 U.S.C. 112, 6th paragraph:

- a. As per claim 8 and 9: "polling means"
- b. As per claim 8 and 10: "comparison means"
- c. As per claim 10: "allocation means"

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim language in the following claims are not clearly understood.

- a. As per claim 5 and 12, lines 2-4, it is clearly not understood what is meant by "perceptible change in response time". Perceptible change in response time can vary from one user to next. To determine what is perceptible by an end-user is by matter of opinion.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-16 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention.

Regarding claim 1, while the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to a particular machine or apparatus or (2) transform a particular article to a different state or thing (See *In re Bilski*, 545 F.3d 943, 88 USPQ2d 1385 (Fed Cir. 2008)). The instant claims neither transform a particular article nor positively tie to a particular machine or apparatus, and therefore do not qualify as a statutory process.

Regarding claims 8, the claim is directed to a "system" or machine, but fails to disclose physical "things". The claim elements polling means and comparison means can be interpreted as software. Since the word system is recited only in the preamble, and the body of the claim only recites software elements, the claim could reasonably be interpreted as directed to a combination of software elements. While the preamble recites a system, the claim as a whole cannot reasonably be interpreted as a machine, since under 101, a machine is defined as a physical device or a combination of devices having functionalities to effect an action or a result, and the software is not physical devices or objects. Thus, the claim only recites software per se (descriptive material covered in MPEP 2106.01), which constitute as non-statutory subject matter.

Regarding claim 15, the claimed invention in claim 15 is a computer program lacking the necessary physical components (hardware) required for execution. Since

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claim 15 is clearly not a process or a composition of matter, it appears to fail to fall within a statutory category and thus non-statutory.

Regarding claim 16, while the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to a particular machine or apparatus or (2) transform a particular article to a different state or thing (See *In re Bilski*, 545 F.3d 943, 88 USPQ2d 1385 (Fed Cir. 2008)). The instant claims neither transform a particular article nor positively tie to a particular machine or apparatus, and therefore do not qualify as a statutory process. A computer readable medium is an insignificant extra-solution activity that will not transform an unpatentable principle into a patentable process.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1-5, 8-12 and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Brenner et al. (Brenner) US Patent No. 6658449.

With respect to claim 1, Brenner teaches on a method of scheduling a transaction request to a central processing unit in a computing system, comprising the

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steps of, for a transaction request, polling at least one central processing unit to determine the current load on the at least one central processing unit (col 1 lines, 53-57); if the current load is below a predetermined threshold, allocating the transaction request to one of the at least one central processing unit (col 1, lines 28-32); or if the current load is above the predetermined threshold, delaying execution of the transaction request for a predetermined time delay, or until polling determines that the load is below the predetermined threshold (col 1, lines 32-35. It is understood that when a queue becomes bottlenecked, transactions are delayed until a load is below a certain threshold and then it is allocated).

With respect to claim 2, Brenner teaches a method in accordance with claim 1, comprising the further step of polling at defined time intervals to determine the system load (col 7, lines 9-10).

With respect to claim 3, Brenner teaches a method in accordance with claim 2, wherein polling continues until the current load drops below the predetermined threshold, at which time the transaction request is allocated (col 8, 13-14 and 23-24).

With respect to claim 4, Brenner teaches a method in accordance with claim 3, wherein the predetermined threshold is achieved when the at least one of a plurality of CPU's becomes idle (col 4, lines 59-54; col 10, lines 23-29).

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With respect to claim 5, Brenner teaches a method in accordance with claim 4, wherein the predetermined time delay is chosen such that an end user cannot determine any perceptible change in response time (col 8, lines 15-16).

With respect to claim 8, Brenner teaches A system for scheduling an incoming transaction to a central processing unit in a computing system, comprising: polling means arranged to, on receipt of a transaction request, poll at least once central processing unit to obtain a value for the central processing unit load (col 1, lines 53-57), comparison means arranged to, if the current load is below a predetermined threshold, allocate the transaction request to one of the at least one central processing unit (col 1, lines 28-32), if the current load is above the predetermined threshold, delay execution of the transaction request for a predetermined time period (col 1, lines 28-32).

With respect to claim 9, Brenner teaches a system in accordance with claim 8, wherein the polling means is arranged to continue to poll at defined time intervals to determine the system load (col 7, lines 9-10).

With respect to claim 10, Brenner teaches a system in accordance with claim 9, comprising allocation means which is arranged to allocate the transaction when the comparison means determines that the current load has dropped below the predetermined threshold (col 7, lines 28-30).

With respect to claim 11, Brenner teaches a system in accordance with claim 10, wherein the predetermined threshold is achieved when the at least one of a plurality of CPU's becomes idle (col 4, lines 59-54; col 10, lines 23-29).

With respect to claim 12, Brenner teaches a system in accordance with claim 11, wherein the predetermined time delay is chosen such that an end user cannot determine any perceptible change in response time (col 8, lines 15-16).

With respect to claims 15 and 16, both claims are rejected under the same rationale as claims 1 thru 6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-7 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brenner et al. (Brenner) US Patent 6658449.

With respect to claim 6, Brenner teaches a method in accordance with claim 5. Brenner teaches a predetermined threshold, such as 1.5 seconds (Col 7 line 30). However, Brenner does not teach, wherein the predetermined time delay does not exceed 500 milliseconds.

However, it is noted that this is a common sense solution to the problem of perceptible change in response time, as addressed in claim 5. There are a finite number of identified predictable solutions that a person of ordinary skill has good reason to pursue as it relates to perceptible change in response time. The issue with perceptible change in response time is that an end user cannot discern the difference between .5 seconds and 1.5 seconds. The predictable solution of 500 milliseconds (.5 seconds) is an arbitrary number and it would be obvious to try and subsequently solve the issue of predetermine time delays as it relates to perceptible change in response time (See MPEP 2141). It also follows that a person of ordinary skill would recognize that the proper methods for increasing the efficiency of a transaction system, as it relates to claim 5, is to delay a transaction with a predetermined time that an end user cannot determine any perceptible change in responds time; the primary example being a predetermined time delay does not exceed 500 milliseconds, as in claim 5. A person of ordinary skill in the art would further recognize the well known methods of using different load balancing techniques. Therefore, it would have been prima facie obviousness to a person of ordinary skill in the art to modify 1.5 seconds to .5 second taught by Brenner.

With respect to claim 7, Brenner teaches a method in accordance with claim 5. However, Brenner does not teach wherein the predetermined time delay is in the order of one to fifteen time slice intervals.

However, it is noted that this is a common sense solution to the problem of perceptible change in response time, as addressed in claim 5. There are a finite number of identified predictable solutions that a person of ordinary skill has good reason to pursue as it relates to perceptible change in response time. The issue with perceptible change in response time is that an end user cannot discern the difference between one to fifteen time slice intervals or twenty time slice intervals. The predictable solution of one to fifteen time slice intervals is an arbitrary number and it would be obvious to try and subsequently solve the issue of predetermine time delays as it relates to perceptible change in response time (See MPEP 2141). It also follows that a person of ordinary skill would recognize that the proper methods for increasing the efficiency of a transaction system, as it relates to claim 5, is to delay a transaction with a predetermined time that an end user cannot determine any perceptible change in responds time; the primary example being a predetermined time delay is in the order of one to fifteen time slice intervals, as in claim 5. A person of ordinary skill in the art would further recognize the well known methods of using different load balancing techniques. Therefore, it would have been prima facie obviousness to a person of ordinary skill in the art to minimize the number of time slices if possible depended upon the operating system being used.

With respect to claim 13, Brenner teaches a system in accordance with claim 12. Brenner teaches a predetermined threshold, such as 1.5 seconds (Col 7 line 30) however, Brenner does not teach wherein the predetermined time delay does not exceed 500 milliseconds.

However, it is noted that this is a common sense solution to the problem of perceptible change in response time, as addressed in claim 12. There are a finite number of identified predictable solutions that a person of ordinary skill has good reason to pursue as it relates to perceptible change in response time. The issue with perceptible change in response time is that an end user cannot discern the difference between .5 seconds and 1.5 seconds. The predictable solution of 500 milliseconds (.5 seconds) is an arbitrary number and it would be obvious to try and subsequently solve the issue of predetermine time delays as it relates to perceptible change in response time (See MPEP 2141). It also follows that a person of ordinary skill would recognize that the proper methods for increasing the efficiency of a transaction system, as it relates to claim 12, is to delay a transaction with a predetermined time that an end user cannot determine any perceptible change in responds time; the primary example being a predetermined time delay does not exceed 500 milliseconds, as in claim 12. A person of ordinary skill in the art would further recognize the well known methods of using different load balancing techniques. Therefore, it would have been prima facie obviousness to a person of ordinary skill in the art to modify 1.5 seconds to .5 second taught by Brenner.

With respect to claim 14, Brenner teaches a method in accordance with claim 12. However, Brenner does not teach wherein the predetermined time delay is in the order of one to fifteen time slice intervals.

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However, it is noted that this is a common sense solution to the problem of perceptible change in response time, as addressed in claim 12. There are a finite number of identified predictable solutions that a person of ordinary skill has good reason to pursue as it relates to perceptible change in response time. The issue with perceptible change in response time is that an end user cannot discern the difference between one to fifteen time slice intervals or twenty time slice intervals. The predictable solution of one to fifteen time slice intervals is an arbitrary number and it would be obvious to try and subsequently solve the issue of predetermine time delays as it relates to perceptible change in response time (See MPEP 2141). It also follows that a person of ordinary skill would recognize that the proper methods for increasing the efficiency of a transaction system, as it relates to claim 12, is to delay a transaction with a predetermined time that an end user cannot determine any perceptible change in responds time; the primary example being a predetermined time delay is in the order of one to fifteen time slice intervals, as in claim 12. A person of ordinary skill in the art would further recognize the well known methods of using different load balancing techniques. Therefore, it would have been prima facie obviousness to a person of ordinary skill in the art to minimize the number of time slices if possible depended upon the operating system being used.

Conclusion

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. Nage (U.S. Patent No. 6006248), Borcharding et al. (U.S. Patent

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No. 5303369) and Islam et al. (U.S. Publication No. 2004/0103194) teach methods of load balancing and scheduling. Porterfield (U.S. Patent No. 6141715) and Bishop et al. (U.S. Patent No. 6049798) teach methods of resource monitoring and allocation.

Condor – A hunter of Idle Workstation is a white paper written by Litzkow, Livny, and Mutka from the computer science department at the University of Wisconsin. This article teaches on the design, implementation, and performance of the Condor scheduling system and Idle workstations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Douglas Bryant, whose telephone number is 571-270-7707. The examiner can normally be reached on Monday-Thursday and alternate Friday from 8:30 am to 6:30 pm Est.

If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, David Robertson can be reached on 571-272-4186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information about unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/D. B./

Douglas Bryant

Examiner, Art Unit 4123

March 3, 2009

/Emerson Puente/

Primary Examiner, Art Unit 2113